

FEB 01 2008

Customer No.: 31561  
Application No.: 10/708,428  
Docket No.: 12539-US-PAAMENDMENTTo the Specification:

Please amend paragraph [0015] as indicated hereinafter.

[0015] In the aforementioned transmitter, the quadrature module can further ~~comprises~~ comprise a base band transconductance and a switching pair. The current sink module is arranged therebetween, and when the current sink module is enabled, the switching pair is disabled. When the current sink module is enabled within a predetermined time interval, and the switching pair is enabled after the predetermined time interval lapses.

Please amend paragraph [0036] as indicated hereinafter.

[0036] Referring to Fig. 4A, the offset compensation device 450a further comprises a current-to-voltage (I-V) converter 452a and a DC offset minimum loop 454a, which are connected in turn. The I-V converter 452a is coupled to the current sink 430a for converting the current offset into a voltage offset. The DC offset minimum loop 454a receives the voltage offset and perform a voltage offset calibration on the voltage offset. The compensated or calibrated result is then feedback to the DAC 410a, the base band filter 412a or the base band transconductance stage 430a. The offset compensation device 450a together with the current sink 440a are activated to perform the detection and calibration function with the time interval T (see FIG. 4B). The result is the current offset before the switching pair 432a and 432b is reduced

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and the carrier leakage is also reduced when the offset compensation devices 450a, 450b reduce the output voltage offset. When the output offset voltage ( $V_{o\_offset\_I}$ ,  $V_{o\_offset\_Q}$ ) is reduced by the injection compensation current or voltage, the current offset before the switching pairs of the quadrature modulator is also reduced and the carrier leakage is ~~this~~thus reduced. The circuitry of the offset compensation devices 450a, 450b is only an example for describing the embodiment of the present invention, but not for limiting the scope of the present invention. For those skilled in the art, other modifications for the offset compensation devices 450a, 450b are still within the scope of the invention.